31. (New) The method of claim 11, wherein the edge switch can receive a second acknowledgment packet subsequently to receiving the first acknowledgment packet, and wherein the second acknowledgement packet will not include a set broadcast learn flag.

32. (New) The method of claim 11, further comprising:
in response to a link failure, constructing a new pruned broadcast tree, including receiving a new dynamic cost information packet, removing all broadcast paths to other switches, and sending a new acknowledgement packet in response to the new dynamic cost information packet in order to establish a new broadcast path.

REMARKS/ARGUMENTS

In section 1 of the Office Action, the proposed drawing corrections filed on March 11, 2003 were approved. Enclosed herewith are formal drawings for Figure 31 and Figure 32 with the approved drawing corrections. Also enclosed herewith is a LETTER TO THE OFFICIAL DRAFTSPERSON for the formal drawings for Figure 31 and Figure 32.

Accordingly, Applicant respectfully requests the approval of the formal drawings for Figure 31 and Figure 32.

In section 2 of the Office Action, claims 21 and 24 were objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject

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matter of a previous claim. Applicant is canceling claims
21 and 24 in this amendment.

Accordingly, Applicant respectfully requests the
withdrawal of the objections in section 2 of the Office
Action.

In section 3 of the office action, claims 1, 8-10, 11,
and 18-26 were rejected under 35 U.S.C. 103(a) as allegedly
being unpatentable over Dutt et al. (USP 6,202,114) in view
of Dobbins et al. (USP 5,825,722). Applicant respectfully
traverses the rejection.

Dutt is directed to a class of algorithms for the
automatic reconfiguration of a network in the event of a
link failure. Dutt uses Bridge Protocol Data Unit (BPDU)
frames to determine which port on a bridge will be in a data
forwarding state and which ports will be in a data blocking
state. The Examiner correctly admits in the office action
that Dutt does not disclose dynamic cost information
packets. In an attempt to overcome the deficiency of Dutt,
the Examiner relies on Dobbins in an attempt to show the use
of dynamic cost information packets in network routing.

Dobbins is directed to providing a topology and
connection services which include a distributed link state
protocol for determining the inter-switch topology. Dobbins
discloses sending hello packets on all switch interfaces to
establish and maintain neighbor relationships.

Independent claim 1 distinguishes over the combination
of Dutt and Dobbins at least by reciting, a method including
"*constructing a pruned broadcast tree by propagation of
dynamic cost information packets from edge switches, wherein
a dynamic cost information packet is sent by an edge switch
and a receiving switch sends back a first acknowledgement
packet to the edge switch in response to first dynamic cost*

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information packet, and wherein the first acknowledgement
packet will have a set broadcast learn flag to inform the
edge switch that broadcast packets will be transmitted from
a particular port of the edge switch, where the particular
port has received the first acknowledgement packet with the
set broadcast learn flag", and such recited features are not
disclosed or suggested Dutt and Dobbins, considered singly
or in combination. As noted in page 11 of the
specification, these claimed features beneficially assure
that the switch receiving the first cost packet from an edge
switch is picking the initial lowest latency part from the
edge switch and that the load balance protocol does not
require a separate pass or packet type for the broadcast
setup.

It would not have been obvious to modify Dutt with
Dobbins because the combination would require a substantial
reconstruction and redesign of the elements disclosed in the
primary reference. (See MPEP 2143.01). For example, there
is no suggestion in the references on how to modify the
elements in the Dutt to perform the step of *"constructing a*
pruned broadcast tree by propagation of dynamic cost
information packets from edge switches, wherein a dynamic
cost information packet is sent by an edge switch and a
receiving switch sends back a first acknowledgement packet
to the edge switch in response to first dynamic cost
information packet, and wherein the first acknowledgement
packet will have a set broadcast learn flag to inform the
edge switch that broadcast packets will be transmitted from
a particular port of the edge switch, where the particular
port has received the first acknowledgement packet with the
set broadcast learn flag". Furthermore, Dutt and Dobbins do
not suggest or disclose any interface circuitry, modules,
systems, methods, and/or techniques that permit the elements

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disclosed in Dutt to perform the various steps in claim 1. Therefore, the modification of Dutt, as suggested in the Office Action, is improper.

Accordingly, claim 1 is patentable over the combination of Dutt and Dobbins.

Claims 8-10 and 23 depend from claim 1 and are patentable over the combination of Dutt and Dobbins for at least the same reasons that claim 1 is patentable over the same combination.

Each of the claims 8-10 and 23 further distinguishes over the combination of Dutt and Dobbins by reciting additional features.

Accordingly, each of the claims 8-10 and 23 is patentable over the combination of Dutt and Dobbins.

Independent claim 11 is patentable over the combination of Dutt and Dobbins at least for the same reasons that claim 1 is patentable over the same combination. Claim 11 distinguishes over the combination of Dutt and Dobbins at least by reciting, a network "*including a computer readable storage medium tangibly embodying a method operable within said network switch for managing a broadcast tree, said method comprising the steps of: constructing a pruned broadcast tree by propagation of dynamic cost information packets from edge switches, wherein a dynamic cost information packet is sent by an edge switch and a receiving switch sends back a first acknowledgement packet to the edge switch in response to first dynamic cost information packet, and wherein the first acknowledgement packet will have a set broadcast learn flag to inform the edge switch that broadcast packets will be transmitted from a particular port of the edge switch, where the particular port has received the first acknowledgement packet with the set broadcast learn flag*", and such recited features are not disclosed or

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suggested by Dutt and Dobbins, considered singly or in combination.

Accordingly, claim 11 is patentable over the combination of Dutt and Dobbins.

Claims 18-20 and 26 depend from claim 11 and are patentable over the combination of Dutt and Dobbins for at least the same reasons that claim 11 is patentable over the same combination.

Each of the claims 18-20 and 26 further distinguishes over the combination of Allon and Grover by reciting additional features.

Accordingly, each of the claims 18-20 and 26 is patentable over the combination of Dutt and Dobbins.

For the above reasons, Applicant requests reconsideration and withdrawal of this rejection under 35 U.S.C. §103.

In section 4 of the office action, claims 2-7 and 12-17 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Dutt et al. (USP 6,202,114) in view of Dobbins et al. (USP 5,825,722) as applied to claims 1 or 11, and further in view of Allon et al. (USP 5,539,883). Applicant respectfully traverses the rejection.

Claims 2-7 and 12-17 depend from claim 1 and claim 11, respectively and are patentable over the combination of Dutt and Dobbins for at least the same reasons that claim 1 is patentable over the same combination.

Each of the claims 2-7 and 12-17 further distinguishes over the combination of Dutt and Dobbins and Allon by reciting additional features.

Furthermore, it would not have been obvious to modify Dutt with Dobbins and Allon because the combination would require a substantial reconstruction and redesign of the

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.elements disclosed in the primary reference. (See MPEP 2143.01). For example, there is no suggestion in the references on how to modify the elements in the Dutt to perform the steps recited in claim 1. Furthermore, Dutt and Dobbins and Allon do not suggest or disclose any interface circuitry, modules, systems, methods, and/or techniques that permit the elements disclosed in Dutt to perform the various steps in claim 1. Therefore, the modification of Dutt, as suggested in the Office Action, is improper.

Accordingly, each of the claims 2-7 and 12-17 is patentable over the combination of Dutt and Dobbins and Allon.

For the above reasons, Applicant requests reconsideration and withdrawal of this rejection under 35 U.S.C. §103.

New dependent claims 27-32 are being added and recite features that are not disclosed or suggested by Dutt and Dobbins and Allon, considered singly or in combination.

For the above reasons, Applicant respectfully requests allowance of all pending claims.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is respectfully requested to specifically point out where such teachings may be found.

Shown in the section below is a marked-up version of the changes made to the specification or claims by the current amendment. The section is captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

<u>In the claims:</u>

Please amend claims 1 and 11 as shown below:

1. (Three Times Amended) A method operable within a network switch for managing a broadcast tree, said method comprising the steps of:

constructing a pruned broadcast tree by propagation of dynamic cost information packets <u>from edge switches, wherein a dynamic cost information packet is sent by an edge switch and a receiving switch sends back a first acknowledgement packet to the edge switch in response to first dynamic cost information packet, and wherein the first acknowledgement packet will have a set broadcast learn flag to inform the edge switch that broadcast packets will be transmitted from a particular port of the edge switch, where the particular port has received the first acknowledgement packet with the set broadcast learn flag</u>; and

forwarding received broadcast messages to other network devices in accordance with said pruned broadcast tree~~, wherein an acknowledgement message is received in response to the dynamic cost information packet, where the acknowledgement message indicates if an associated path should be used for broadcast to an identified network device~~.

11. (Three Times Amended) A network switch including a computer readable storage medium tangibly embodying a method operable within said network switch for

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managing a broadcast tree, said method comprising the steps of:

constructing a pruned broadcast tree by propagation of dynamic cost information packets <u>from edge switches, wherein a dynamic cost information packet is sent by an edge switch and a receiving switch sends back a first acknowledgement packet to the edge switch in response to first dynamic cost information packet, and wherein the first acknowledgement packet will have a set broadcast learn flag to inform the edge switch that broadcast packets will be transmitted from a particular port of the edge switch, where the particular port has received the first acknowledgement packet with the set broadcast learn flag;</u> and

forwarding received broadcast messages to other network devices in accordance with said pruned broadcast tree, ~~wherein an acknowledgement message is received in response to the dynamic cost information packet, where the acknowledgement message indicates if an associated path should be used for broadcast to an identified network device~~.

Please cancel claims 21, 22, 24, and 25.

Please add the following claims:

27. (New) <u>The method of claim 1, wherein the first acknowledgment packet is used to establish a broadcast path from the edge switch to the receiving switch.</u>

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28. (New) The method of claim 1, wherein the edge switch can receive a second acknowledgment packet subsequently to receiving the first acknowledgment packet, and wherein the second acknowledgement packet will not include a set broadcast learn flag.

29. (New) The method of claim 1, further comprising:
        in response to a link failure, constructing a new pruned broadcast tree, including receiving a new dynamic cost information packet, removing all broadcast paths to other switches, and sending a new acknowledgement packet in response to the new dynamic cost information packet in order to establish a new broadcast path.

30. (New) The method of claim 11, wherein the first acknowledgment packet is used to establish a broadcast path from the edge switch to the receiving switch.

31. (New) The method of claim 11, wherein the edge switch can receive a second acknowledgment packet subsequently to receiving the first acknowledgment packet, and wherein the second acknowledgement packet will not include a set broadcast learn flag.

32. (New) The method of claim 11, further comprising:
        in response to a link failure, constructing a new pruned broadcast tree, including receiving a new dynamic cost information packet, removing all broadcast paths to other switches, and sending a new acknowledgement packet in response to the new dynamic

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cost information packet in order to establish a new broadcast path.

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CONTACT INFORMATION

If the Examiner has any questions or needs any additional information, the Examiner is invited to telephone the undersigned attorney at (805)681-5078.

Date: <u>July 9, 2003</u>

Respectfully submitted,

BALLARD C. BARE

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